CLAIMS

1. A laminate structure comprising:

(i) a substrate layer comprising a woven or non-woven material,

(ii) a moisture vapor control layer comprised attached to said substrate,

(iii) a tie layer comprising one or more copolymers comprising from about 30 to about 90 weight percent ethylene co-monomer units and from about 10 to about 70 weight percent vinyl acetate co-monomer units, and

(iv) a layer comprising one or more copolyetherester(s) in an amount of at least 50 weight percent based on the total amount of polymer in the layer.

2. A laminate structure according to claim 1, wherein themoisture vapor control layer is comprised of polyethylene, polypropylene, or a copolymer thereof comprising ethylene and/or propylene as the main repeating units.

3. A laminate structure according to claim 2 wherein said moisture vapor control layer is a film.

4. A laminate structure according to claim 3 wherein said moisture vapor control layer has a thickness of from 1 to 5 μm.

5. A laminate structure according to claim 1 wherein the thickness of the layer comprising the copolyetherester(s) is from about 12 μm to about 30 μm and the thickness of the tie layer is from about 1 μm to about 5 μm.

6. A laminate structure according to claim 5 wherein the non-woven material comprises polyethylene, polypropylene, polyester or blends thereof.

7. The process of claim 6 wherein the bonding strength between the substrate layer and the film layers, measured according to ISO 2411, is at least 1 N/m.

8. A laminate structure according to claim 7 wherein the tie layer comprises one or more copolymers comprising 67-77 weight percent ethylene co-monomer units and 23-33 weight percent, vinyl acetate co-monomer units.

9. A laminate structure according claim 1 wherein the layer comprising the copolyetherester(s) contains at least 90 weight percent of the copolyetherester(s) based on the weight of polymer in that layer.

10. A laminate structure according to claim 1 wherein

$$MVTR_{CAS} > MVTR_{SAC}$$

wherein $MVTR_{CAS}$ is the MVTR in the direction away from the copolyetherester-containing layer and tie layer and towards the substrate layer, and $MVTR_{SAC}$ is the MVTR in the direction away from the substrate layer and towards the tie layer and copolyetherester-containing layer.

11. A laminate structure according to claim 10 wherein the ratio of $MVTR_{CAS}$ / $MVTR_{SAC}$ is at least about 1.5.

12. A laminate structure according to claim 1, further comprising:

(v) an adhesive or primer, and

(vi) a second substrate layer comprising at least 50 weight percent of a polyolefin.

13. A process for the production of a laminate structure according to claim 1, comprising the steps of forming or providing a substrate layer, providing on a surface of said substrate a moisture vapor control layer, providing on a surface of said moisture vapor control layer remote from said substrate a tie layer and a copolyetherester-containing layer, and further providing on the surface of the copolyetherester-containing layer remote from the tie layer a peelable release layer.

14. The process according to claim 13 further step of removing the release layer, either on-line subsequent to cooling of the laminate, or at a later stage after transportation of the laminate.

15. A process according to claim 13 wherein the process is an extrusion coating process wherein the moisture vapor control layer, the tie layer,the copolyetherester-containing layer, and the peelable release layer are coextruded together as one multiple layer film.

16. An insulation system comprising

(a) a first laminate structure comprising a substrate layer and a substantially liquid impermeable moisture vapor permeable membrane layer wherein

$$MVTR_{CAS} > MVTR_{SAC}$$

wherein $MVTR_{CAS}$ is the MVTR in the direction away from the substantially liquid impermeable moisture vapor permeable membrane layer and towards the substrate layer, and $MVTR_{SAC}$ is the MVTR in the direction away from the substrate layer and towards the substantially liquid impermeable moisture vapor permeable membrane layer;

(b) a layer of an insulation material; and

(c) a second laminate structure comprising a substrate layer and a moisture vapor permeable membrane layer wherein

$$MVTR_{CAS} > MVTR_{SAC}$$

wherein $MVTR_{CAS}$ is the MVTR in the direction away from the substantially liquid impermeable moisture vapor permeable membrane layer and towards the substrate layer, and $MVTR_{SAC}$ is the MVTR in the direction away from the substrate layer and towards the substantially liquid impermeable moisture vapor permeable membrane layer,

wherein the substantially liquid impermeable moisture vapor permeable membrane layer of the first laminate structure is in contact with one side of the insulation material layer and the moisture vapor permeable membrane layer of the second laminate structure is in contact with the other side of the insulation material layer.

17. The insulation system of claim 16 wherein the substrate layer of the first laminate structure and the second laminate structure are each a woven or non-woven material comprised of at least 50 weight percent of a polyolefin.

18. The insulation system of claim 16 wherein the insulation layer material comprises glass fiber, extruded or expanded polystyrene, mineral wool, cellulose fiber, or mixtures thereof.

19. The insulation system of claim 16 wherein the substantially liquid impermeable moisture vapor permeable membrane layer of the first laminate structure and the the moisture vapor permeable membrane layer of the second laminate each comprises at least 50 % by weight of polymers selected from the group of block copolyether esters, block copolyether amides, copolyether imide esters, polyurethanes, and polyvinyl alcohol.

20. The insulation system of claim 16 wherein said second laminate structure includes a moisture vapor control layer positioned between the substrate layer and the moisture vapor permeable membrane layer.

21. The insulation system of claim 20 wherein the polymer in the control layer comprises polyethylene, polypropylene, or a copolymer thereof comprising ethylene and/or propylene as the main repeating units.